

HILLSIDE ORDINANCE PROCESS

LITERATURE AND CASE STUDY REVIEW OF HILLSIDE REGULATION

Meeting with Planning and Zoning Commission, Homeowner's Associations, and planning staff to discuss hillside ordinance regulation and the establishment of a hillside ordinance team on April 18, 1986. The team consisted of:

Lane Price	- Soil Conservation Service
Gene Barker	- U.S. Geologic Survey
Richard Burns	- U.S. Forest Service
David Quinn	- Department of Natural Resources and Community Development
Tom Tarrant	- Asheville City Engineering
Patsy Brison	- Asheville Legal Services
Verl Emrick	- Asheville Planning Department
Al Kopf	- Asheville Planning Department

INVESTIGATION OF WHERE HILLSIDES ARE MOST AFFECTED BY DEVELOPMENT AND WHAT LAND USES OCCUR OR COULD OCCUR IN THESE AREAS

A topographic map (U.S.G.S. Map), zoning map (City of Asheville and extra territorial jurisdiction) and soils map (U.S. Soils Conservation Service Map of severe soils limitation map for development) were overlaid into a composite map. It was evident that most of the areas of severe soil limitations for development occurred in districts zoned R-1, R-2, R-3, and OI, whereas some were also located in R-4, R-5, and CH. Also, a major portion of the severe soils (which are generally more than 15% slope) are located above elevation 2,220.

The hillside ordinance team met on April 30, 1986 and discussed how the Hillside Overlay District might be defined verbally (15% or greater in average natural slope or above 2,220 feet in elevation) or graphically, whichever is most feasible to implement and addresses the areas which are environmentally sensitive to development. The District might only address residential group developments for the interim since this predominant kind of development can be readily controlled via units and project review whereas no land use intensity system could be used for other kinds of land uses.

The team also reviewed the Asheville City Ordinance, hillside ordinances from cities around the United States and hillside ordinance literature. Thereafter, the team examined the issues which affect Asheville's hillsides and found two methodologies which might best address these issues:

SLOPE/DWELLING UNITS - The number of dwelling units decreases as the slope of the site increases. This would:

- Reduce the intensity of land use on the hillsides which should not be the same as "flat" terrain since the impact on the environment and support services is often greater.
- Reduce City obligation for roads, sewer, water, and garbage and other support systems which are often more costly and demanding in hillside areas.
- Minimize the dominance of buildings on the hillsides so that the mountain's aesthetic character is maintained

SLOPES/NATURAL COVER TO REMAIN - The amount of land to be left in its natural terrain increases with the slope. This would:

- Lessen erosion and slope stability problems
- Reduce the likelihood of mass movements such as landslides, etc.
- Provide a natural land cover on the hillsides which is pleasing and consistent with the mountainous character of Asheville

HOW TO REGULATE HILLSIDE DEVELOPMENT

In order to determine the actual numbers for regulating hillside development, nine group developments were reviewed by the hillside team on May 23, 1986. The projects were chosen because they:

- Represented a variety of locales in the City
- Were situated on hillsides (one ridgetop)
- Represented different land use districts
- Were readily available and complete in site plan format
- Were sometimes "controversial" in nature

The sites were visited and photographed. Thereafter, each of the sites were analyzed in terms of: zoning, density, average slope, area graded, and building/road/parking coverage. Certain "trends" were found during this analysis regarding density and grading.

DENSITY - In projects (25 - 30% slopes) located in land use district R-3 (CH), the density was reduced about half of the maximum density normally permitted (8.2/16 units - St. Dunstons, Westminster, Woodberry, and River Ridge).

- In projects (20 - 25% slopes) located in land use district R-2, the density was reduced about half of the maximum density normally permitted (3.2/6 units - Timber and Belvedere)
- The one project (30% slope) in an OI district was reduced to about a quarter of the maximum density normally permitted (8.6/32 units - Wind in Oaks)

GRADING - Sites in which alot of the natural vegetation was retained had about 50% of the site graded (Timbers, Belvedere). Projects where alot of the vegetation was removed had about 70% plus of the site graded (Wind in Oaks), St. Dunstons, Woodberry, River Ridge).

DETERMINATION OF HILLSIDE REGULATION VARIABLES

It was determined by the team that the chart used by the City of Chula Vista, CA, was an excellent methodology because it addressed density/ natural cover, had a sliding scale, was sophisticated but easy to use. The components and variables within each component had to be determined for the local environment:

HINGE - Distance (8 inches narrowed "degree" of angle whereas 4 inches widened "degree" of angle) to average natural scope scale.

AVERAGE NATURAL SLOPE OF THE SITE -

The average natural slope of the site would be determined by adding the length of all of the contours within the site and placing in a formula:

$$S = \frac{.0023 \times I \times L}{A}$$

The lowest, 15%, is where the U.S.D.A. begins the severe soil limitations category for building limitations in certain soils. It might be the realistic minimum percentage so as not to include the balance of the City's land area. The highest, 50%, is very steep and most restrictive limit on the scale. Alternatives of 40% (very hard to stand on) and 45% as a mid-range were also used.

PERCENTAGE OF SITE WHICH CAN BE GRADED (NOT IN ITS NATURAL STATE) -

The least restrictive scale was 95-5% since 95% of the site could be graded but it was also more restrictive with a 5% maximum grading category for very steep slopes. 80-10% was most restrictive since only 80% of the site could be graded at any time but least restrictive on the steeper slopes since up to 10% of the site was the "ceiling" for maximum grading of any site. Two alternatives, 90-10% and 85-10%, were used as middle ground scales.

PERCENTAGE OF GROSS DENSITY PERMITTED -

The scale of 90-10% is used proportionately for all categories to be equitable and always provide some value to the land to avoid inverse condemnation.

The variables of the components were analyzed in terms of the nine case studies and their overall:

RANGE - Avoid large spreads and extreme changes between most of the project's existing and proposed grading and density figures

AVERAGE - Average of the project's ranges within the graph is not extremely high (too restrictive for development) now low (doesn't address hillside issues).

Three charts were chosen from a number of experimental charts which represent the least, middle ground, and most restrictive regulatory scales. These were reviewed by the hillside ordinance team on June 20, 1986, and the Planning and Zoning Commission on July 21, 1986.

The final scale should reflect local environmental concerns and development trends. It should be fair and equitable and approximate density development trends while emphasizing the preservation of the natural environment of the site.

WHAT THE ORDINANCE WILL NOT DO AS WRITTEN:

It won't stop ridgeline development. Ridgelines can be more level than a hillside but the density can be reduced some (and in turn the mass). Revision of the ridge law might be a better mechanism if ridgeline development should be more stringent.

It won't address high density hillside areas zoned OI and R-4 very effectively or directly although the amount of the site graded could be affected indirectly. Actual rezoning of property would be a mechanism to reduce density/building height in these districts.

It won't preserve the existing vegetation as thoroughly as a tree ordinance on the hillsides, especially for fine specimens or stands of trees.

It does not affect building height nor design. The group development process might be able to address "massing" of buildings or large "stilts" via the "character of the district". Design review for the buildings could be a more effective method as would an ordinance amendment which would reduce the building height in R-3, R-4, R-5, CH and OI zones (and possibly the entire city so as not to compete with the mountain scenery).

It would not address the smaller developments (non-group development) since alot more manpower would be required to implement this ordinance.